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<u>L4</u>	l1 and l2 and L3	6	<u>L4</u>
<u>L3</u>	cotton	34383	<u>L3</u>
<u>L2</u>	methylarsonic or diuron or cyanazine or clomazone or trifluralin or paraquat or pendimethalin or oxyfluorfen or bispyribac or bis pyribac or quizalofop or fenoxaprop or fluazifop or haloxyfop or sethoxymid or clethodim	620	<u>L2</u>
<u>L1</u>	glyphosate or glufosinate	663	<u>L1</u>

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L4: Entry 5 of 6

File: DWPI

Nov 28, 2002

DERWENT-ACC-NO: 1999-561588

DERWENT-WEEK: 200306

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TITLE: Controlling weeds and volunteer plants in glyphosate tolerant crops, especially soybeans, using combination of glyphosate and e.g. fluazifop or clethodim

INVENTOR: FLINT, J L; GUBBIGA, N G ; PROBST, N J

PRIORITY-DATA: 1998US-077241P (March 9, 1998), 1999US-0264775 (March 9, 1999)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 754918 B	November 28, 2002		000	A01N057/20
WO 9945781 A1	September 16, 1999	E	038	A01N057/20
AU 9929916 A	September 27, 1999		000	A01N057/20
ZA 9901905 A	February 23, 2000		036	A01N000/00
BR 9908694 A	November 21, 2000		000	A01N057/20
EP 1061804 A1	December 27, 2000	E	000	A01N057/20
<u>US-6239072-B2</u>	May 29, 2001		000	A01N035/06
CN 1300185 A	June 20, 2001		000	A01N057/20
MX 2000008851 A1	March 1, 2001		000	A01N035/10
JP 2002506012 W	February 26, 2002		046	A01N057/20

INT-CL (IPC): A01 N 0/00; A01 N 35/06; A01 N 35/10; A01 N 35:10; A01 N 43/40; A01 N 43/54; A01 N 43/76; A01 N 57/02; A01 N 57/20; A01 N 43:40; A01 N 43:50; A01 N 43:60; A01 N 43:76; A01 N 57/20; A01 N 35:10; A01 N 43:40; A01 N 43:50; A01 N 43:60; A01 N 43:76; A01 N 57/20

ABSTRACTED-PUB-NO: US 6239072B

BASIC-ABSTRACT:

NOVELTY - A herbicidal mixture comprises a glyphosate herbicide (I) and a non-glyphosate herbicide (II) which is an acetyl coenzyme A carboxylase (ACCase) inhibitor or an acetohydroxyacid synthase (AHAS) inhibitor.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(a) a method of controlling a volunteer species in a field of a crop species comprising applying at least two herbicides in any order or simultaneously, where the volunteer species is controlled by at least one of the herbicide and the crop species is tolerant to all of the herbicides; and

(b) a method of controlling glyphosate (GP) susceptible weeds and a GP tolerant first plant species growing in a crop of a GP tolerant second plant species, involving (i) applying (II) to the crops, (II) being toxic to the first plant species and nontoxic to the second plant species and (ii) applying (I) to the crop to control the glyphosate susceptible weeds, where steps (i) and (ii) are sequential (in any order) or simultaneous.

ACTIVITY - Herbicidal

MECHANISM OF ACTION - 5-Enolpyruvylshikimate-3-phosphate synthase (EPSPS) inhibitor; acetyl coenzyme A carboxylase (ACCase) inhibitor; acetohydroxyacid synthase (AHAS)

inhibitor.

USE - For controlling GP-resistant volunteer plants (i.e. the progeny of plants grown in the field the previous season, due to crop rotation), as well as GP-susceptible weeds, in GP-resistant crops. Specifically the volunteer plants are corn, wheat or rice and the crop plants are soybean, canola, sugar beet or cotton (all claimed). A particular application is the control of volunteer corn in soybean crops.

ADVANTAGE - By using a combination of GP and a herbicide having a different mechanism of action, a single application can be used to control GP-tolerant volunteer plants and GP-susceptible weeds without loss of GP-tolerant crop yield.

ABSTRACTED-PUB-NO:

WO 9945781A EQUIVALENT-ABSTRACTS:

NOVELTY - A herbicidal mixture comprises a glyphosate herbicide (I) and a non-glyphosate herbicide (II) which is an acetyl coenzyme A carboxylase (ACCase) inhibitor or an acetohydroxyacid synthase (AHAS) inhibitor.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(a) a method of controlling a volunteer species in a field of a crop species comprising applying at least two herbicides in any order or simultaneously, where the volunteer species is controlled by at least one of the herbicide and the crop species is tolerant to all of the herbicides; and

(b) a method of controlling glyphosate (GP) susceptible weeds and a GP tolerant first plant species growing in a crop of a GP tolerant second plant species, involving (i) applying (II) to the crops, (II) being toxic to the first plant species and nontoxic to the second plant species and (ii) applying (I) to the crop to control the glyphosate susceptible weeds, where steps (i) and (ii) are sequential (in any order) or simultaneous.

ACTIVITY - Herbicidal

MECHANISM OF ACTION - 5-Enolpyruvylshikimate-3-phosphate synthase (EPSPS) inhibitor; acetyl coenzyme A carboxylase (ACCase) inhibitor; acetohydroxyacid synthase (AHAS) inhibitor.

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ADVANTAGE - By using a combination of GP and a herbicide having a different mechanism of action, a single application can be used to control GP-tolerant volunteer plants and GP-susceptible weeds without loss of GP-tolerant crop yield.

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File: DWPI

Jan 6, 2000

DERWENT-ACC-NO: 2000-126660

DERWENT-WEEK: 200176

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TITLE: Synergistic, broad-spectrum herbicidal composition for pre- or post-emergence control of weeds in crops, especially maize

INVENTOR: RUEEGG, W; RUEGG, W

PRIORITY-DATA: 1998CH-0001373 (June 26, 1998)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200000031 A1	January 6, 2000	G	061	A01N043/80
<u>US 20010044382 A1</u>	November 22, 2001		000	A01N043/647
AU 9947768 A	January 17, 2000		000	A01N043/80
EP 1089628 A1	April 11, 2001	G	000	A01N043/80

INT-CL (IPC): A01 N 43/647; A01 N 43/713; A01 N 43/80

ABSTRACTED-PUB-NO: US20010044382A

## BASIC-ABSTRACT:

NOVELTY - Synergistic herbicidal composition contains as active agent a mixture of 5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethylbenzoyl)-3-- (methylthio or methylsulfinyl)-isoxazole (I) with one or more of 32 categories of other herbicides and/or one or more of 11 specific safeners.

DETAILED DESCRIPTION - Herbicidal composition contains (apart from conventional formulation auxiliaries) an active agent mixture of:

(A) 5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethylbenzoyl)-3-(methylthio or methylsulfinyl)-isoxazole (I) with

(B) a synergistic amount of one or more herbicides and/or

(C) a herbicide-antagonist amount of one or more safeners.

(B) are selected from:

(i) chloroacetanilides of formula (II);

(ii) N-(2,4-dimethyl-3-thienyl)-N-(1-methoxy-2-propyl)-chloroacetamide (specifically as the (S)-isomer);

(iii) s-triazines of formula (III);

(iv) cyclohexanediones of formula (IV);

(v) fused triazoles of formula (V);

(vi) 6-chloro-4-(hydroxy or n-octylthio-carbonyloxy)-3-phenyl-pyridazine;

(vii) bromoxynil or ioxynil;

- (viii) 2-(2-(chloro or nitro)-4-methylsulfonyl-benzoyl)-cyclohexane-1,3-di- one;
- (ix) triazolones of formula (VI);
- (x) 5-cyclopropyl-4-(2-methylsulfonyl-4-(chloro or trifluoromethyl)-benzoyl)-isoxazole;
- (xi) glufosinate-ammonium (specifically as the (S)-isomer);
- (xii) sulfonyl ureas of formula (VII) or their sodium salts;
- (xiii) mebutrizin;
- (xiv) aclonifen;
- (xv) glyphosate;
- (xvi) bentazone;
- (xvii) pendimethalin;
- (xviii) dicamba;
- (xix) S-ethyl diisobutylthiocarbamate (butylate);
- (xx) 3-(3-(2-(allyloxycarbonyl)-2-propyloxycarbonyl)-4-chlorophenyl)-2,4-d-  
ioxo-1-methyl-1,2,3,4-tetrahydro-6-trifluoromethyl-pyrimidine;
- (xxi) clomazone;
- (xxii) (2,4-dichlorophenoxy)acetic acid (2,4-D);
- (xxiii) flumiclorac;
- (xxiv) fluthiacet-methyl;
- (xxv) flurtamone;
- (xxvi) flumioxazin;
- (xxvii) paraquat;
- (xxviii) azafenidin;
- (xxix) fluthiamide;
- (xxx) fentrazamide;
- (xxxi) isopropazol and
- (xxxii) sulfosate.

The safeners (C) are selected from benoxacor, fenclorim, cloquintocet, mefenpyr-diethyl, furilazol, 4-carboxy-4-carboxymethyl-chroman, pyrrolo-pyrimidine derivative of formula (VIII), fluxofenim, dichlormid, flurazole and MON 4460.

n = 0 or 1;

R4 = Me or Et;

R5 = -CH(Me)CH<sub>2</sub>OMe (specifically as the (S)-isomer), CH<sub>2</sub>OMe or CH<sub>2</sub>OEt;

R7 = Cl or SMe;

R9 = Et, isopropyl or tert. butyl;

R10 = Et or n-propyl;

R11 = COO(1/2Ca), CH<sub>2</sub>CH(Me)SEt or tetrahydropyran-4-yl;

X = O, NOEt or NOCH<sub>2</sub>CH=CHCl;

R12 = H, OMe or OEt;

R13 = Me, OMe or F;

R14 = COOMe, F or Cl;

R15 = H or Me;

Y, Z' = N or CH;

R16, R20 = F or Cl;

R21 = CH<sub>2</sub>CH(Cl)COOEt or NHSO<sub>2</sub>Me;

Y1 = N, CH or N(Me);

Y2 = N, CH or Cl;

Y3, Y4 = CH, or together = S or C-Cl;

Y5 = N or CH;

Y6 = Me or OMe and

R24 = CONMe<sub>2</sub>, COOMe, CH<sub>2</sub>CH<sub>2</sub>F or SO<sub>2</sub>Et.

#### ACTIVITY - Herbicidal.

In post-emergence tests against Digitaria, the herbicidal effect was 75 % for 150 g/ha of 5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethylbenzoyl)-3-methylthio-isoxazole (Ia), 25 % for 100 g/ha of halosulfuron and 90% (compared with a calculated value of 81%) for a combination of 150 g/ha (Ia) and 100 g/ha halosulfuron.

#### MECHANISM OF ACTION - None given.

USE - For selective control of weeds in crops (claimed), e.g. cereals, cotton, soya, sugar beet, sugar cane, plantation crops, rape, rice or especially maize (claimed). The compositions are effective against both mono- and dicotyledonous weeds, e.g. Stellaria, Nasturtium, Agrostis, Digitaria, Avena, Setaria, Sinapis, Lolium, Solanum, Phaseolus, Echinochloa, Scirpus, Monochoria, Sagittaria, Bromus, Alopecurus, Sorghum halepense, Rottboelia, Cyperus, Abutilon, Sida, Xanthium, Amaranthus, Chenopodium, Ipomoea, Chrysanthemum, Galium, Viola and Veronica.

ADVANTAGE - Combinations of (A) (known herbicides described in WO9743270) and (B) and/or (C) have synergistic pre- and post-emergence herbicidal activity against a broad spectrum of weeds occurring in crops, allowing use at lower application rates. The presence of (C) also inhibits phytotoxicity to crops. Compared with (A) alone the compositions have a broader herbicidal spectrum and higher selectivity in crops.  
ABSTRACTED-PUB-NO:

#### WO 200000031A EQUIVALENT-ABSTRACTS:

NOVELTY - Synergistic herbicidal composition contains as active agent a mixture of 5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethylbenzoyl)-3-- (methylthio or methylsulfinyl)-isoxazole (I) with one or more of 32 categories of other herbicides and/or one or more of 11 specific safeners.

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- (vi) 6-chloro-4-(hydroxy or n-octylthio-carbonyloxy)-3-phenyl-pyridazine;
- (vii) bromoxynil or ioxynil;
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